

Time: 3 hrs.

AWGALORE

Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020

UNIX System Programming

Max. Marks: 100

Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

PART-A

1	a.		(04 Marks)
	b.	Discuss how to ensure an user program confirming to POSIX standard. Also	(06 Marks)
	c.	structure of a POSIX program. Write POSIX complient C++ program to check the following runtime limits: i) Max number of open files ii) max number of links iii) Max number of real times.	ne signals (05 Marks)
	d.	What is an API? Explain the differences between API and library function.	(05 Marks)
2	a.	What are the file attributes? Some attributes are constant list them, also some are mention the commands and APIs used for the same.	(00 Marks)
	b.	Discuss the differences between ln, ln -s and CP commands with suitable example	es. (06 Marks)
	c.	Explain the differences between file stream pointer and file descriptor.	(06 Marks)
3	a. b.	Write a note on the following APIs: i) access ii) stat/fstat. Write C++ program to emulate UNIX CP command to copy the contents of an e	(10 Marks) xisting file
	υ.	h tet to the file betyt	(04 Marks)
	c.	What are locks? How to set/get advisory locks in UNIX? Explain the API used fo	r the same. (06 Marks)
4	a. b.	What is an exit handler? How to set the exit handlers? Explain with an example. What is an Env list? Explain the APIs used for modifying the environment list.	(06 Marks) (08 Marks)
	c.	Discuss non-local goto statements in ANSI C with suitable example.	(06 Marks)
		PART – B	
5	a.	Explain the differences between fork() and exec() APIs.	(06 Marks)
_	b.	What is race condition? Write a program to avoid race condition, by anowing	g parent to (08 Marks)
	•	execute first, also mention the different ways to avoid race condition. Write a note on process groups and session.	(06 Marks)
(c.	Type the signal most Penlain also write a program using C++ to mask the sign	al SIGINT.
6	a.		(00
	b.	What is a Interval timer? Explain briefly the different ways of setting the interval	(001:111)
	c.	With neat diagram explain the error loging facility.	(06 Marks)
7	a.	With suitable example explain popen() and pclose() functions.	(08 Marks)
	b.	With suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain popul () and polose() random with suitable example explain () and suitable example example explain () and suitable example explain () and suitable example explain () and suitable example example example example explain () and suitable example exa	(0) 2:=::-)
	c	. Explain the limitations of pipe.	(03 Marks)
8	a	. Explain the different APIs used for handling shared memory.	(10 Marks)
	b	Write a note on client-server connection functions.	(06 Marks) (04 Marks)
	С	Explain stream pipes with suitable diagram.	(0.1.2.2.3)